

Source Water Assessment

Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of Environmental Quality (ADEQ) has given a high-risk designation for the degree to which this public water system drinking water source(s) are protected. A designation of high risk indicates there may be additional protection measures for source water implemented at the local level. This does not imply that the source water is contaminated nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination. The complete assessment is available from ADEQ at 1110 W. Washington, Phoenix, Arizona 85007. Electronic copies are available at <https://legacy.azdeq.gov/envirom/water/dw/swap.html>.

Water Quality Monitoring

To ensure continued safety of the drinking water, MCAS Yuma tests your water weekly, monthly and annually. In addition to monitoring for contaminants with established drinking water standards, the base also monitors for unregulated contaminants, which helps the U.S. Environmental Protection Agency (USEPA) determine where certain contaminants occur and whether such contaminants require regulation. Last year, MCAS Yuma performed thousands of water quality tests to evaluate compliance for over 100 different drinking water contaminants. All contaminants registered below detectable levels or below limits set by the USEPA; the table in the pamphlet provides a summary of these results.

General Information about Drinking Water

The sources of drinking water include rivers, reservoirs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity. Some contaminants in source water may include:

- Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.
- Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and Herbicides may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- Organic Chemical Contaminates, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, may also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or may be results of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. However, drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. Some people may be more vulnerable than the general population to contaminants in drinking water. Immunocompromised persons, such as people with cancer undergoing chemotherapy, persons who have undergone organ transplants, other immune system disorders, elderly, and infants can be particularly at risk from infections. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to reduce the risk of infection from Cryptosporidium and other microbial sources are available the Safe Drinking Water Hotline (800-426-4791).

Polyfluoroalkyl substances (PFOS) / Perfluorooctanoic acid (PFOA)

PFOS/PFOA are man-made compounds that are known to be in items such as paper, cleaning products, textiles, pesticides, and Aqueous Film-Forming Foam (AFFF) for extinguishing fires. MCAS Yuma has identified to have used and stored AFFF, mostly for aircraft firefighting. The USEPA health advisory threshold for PFOS/PFOA is 70ppt (parts per trillion) or 70 ng/L (nanograms per liter). On 15 May 2019, MCAS Yuma tested all potable water sources on main base Yuma, Cannon Air Defense Complex, and Martinez Lake Recreational Facility. Results for these three water sources are below USEPA health advisory limit recommendations of 70 ppt.

Lead in drinking water

Sampling of residential taps during 2019 achieved standards for lead in drinking water; federal regulations require us to communicate the following health advisory regarding lead in drinking water: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and children. Lead in drinking water is primarily from materials associated with service lines and home plumbing. MCAS Yuma is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. You can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at www.epa.gov/safewater/lead.

What If I Have Questions About My Drinking Water?

If you have questions about this report or your drinking water supply please, contact Mr. Ronald L Kruse, Installation & Logistics Department, Public Works Director at (928) 269-3523. MCAS Yuma's Public Water System Identification (PWS ID) Number is AZ0414082. Copies of this report will be available at the Water Treatment Plant, Family Housing Office or at <https://www.mcas-yuma.marines.mil/>.

MARINE CORPS AIR STATION YUMA, ARIZONA



2019 Annual Drinking Water Report

The Water We Drink

The Federal Safe Drinking Water Act and Arizona Drinking Water Rules require community water systems to provide annual Consumer Confidence Report (CCR) in order to inform you about your drinking water. The water treatment professionals at Marine Corps Air Station (MCAS) Yuma are proud to provide you with this 2019 Annual Drinking Water Quality Report. We care for your water and staff the MCAS Yuma Public Work Division with water treatment and distribution system operators who meet all state certification requirements. As in the past years, your tap water in 2019 met all of the federal and state drinking water standards. The 2019 CCR provides general information about your MCAS Yuma water.

Where Does Our Water Come From?

MCAS Yuma's main drinking water source is surface water, which comes from the Colorado River via a canal system. The water system also operates a groundwater well used, as needed, to blend with the surface water to improve water quality. MCAS Yuma owns the land around the well and restricts activities to minimize impact.

Understanding the Language of Water

AL = ACTION LEVEL - THE CONCENTRATION OF A CONTAMINANT WHICH, IF EXCEEDED, TRIGGERS TREATMENT OR OTHER REQUIREMENTS.									
MCL = MAXIMUM CONTAMINANT LEVEL - THE "MAXIMUM ALLOWED" IS THE HIGHEST LEVEL OF A CONTAMINANT THAT IS ALLOWED IN DRINKING WATER.									
MCLG = MAXIMUM CONTAMINANT LEVEL GOAL - THE "GOAL" IS THE LEVEL OF A CONTAMINANT IN DRINKING WATER BELOW WHICH THERE IS NO KNOWN OR EXPECTED RISK TO HEALTH.									
MFL = MILLION FIBERS PER LITER. MRDL = MAXIMUM RESIDUAL DISINFECTANT LEVEL. MRDLG = MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL.									
MREM = MILLIREMS PER YEAR - A MEASURE OF RADIATION ABSORBED BY THE BODY. NA = NOT APPLICABLE , SAMPLING WAS NOT COMPLETED BY REGULATION OR WAS NOT REQUIRED.									
NTU = NEPHELOMETRIC TURBIDITY UNITS , A MEASURE OF WATER CLARITY. PC/L = PICOCURIES PER LITER - PICOCURIES PER LITER IS A MEASURE OF THE RADIOACTIVITY IN WATER.									
PPM = PARTS PER MILLION OR MILLIGRAMS PER LITER	<table border="1"> <tr> <td>ppm x 1000 = ppb</td> <td>(MG/L).</td> </tr> <tr> <td>ppb x 1000 = ppt</td> <td>(µG/L).</td> </tr> <tr> <td>ppt x 1000 = ppq</td> <td>LITER.</td> </tr> <tr> <td></td> <td>LITER.</td> </tr> </table>	ppm x 1000 = ppb	(MG/L).	ppb x 1000 = ppt	(µG/L).	ppt x 1000 = ppq	LITER.		LITER.
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ppb x 1000 = ppt		(µG/L).							
ppt x 1000 = ppq		LITER.							
	LITER.								
PPB = PARTS PER BILLION OR MICROGRAMS PER LITER									
PPT = PARTS PER TRILLION OR NANOGRAMS PER									
PPQ = PARTS PER QUADRILLION OR PICOGRAMS PER									
NG/L = NANOGRAM PER LITER									
TT = TREATMENT TECHNIQUE - A TREATMENT TECHNIQUE IS A REQUIRED PROCESS INTENDED TO REDUCE THE LEVEL OF A CONTAMINANT IN DRINKING WATER.									
NON-DETECT - A NON-DETECT MEANS THAT THE LAB DID NOT SEE THE ANALYTE OR THAT THE QUANTITATIVE RESULT WAS LESS THAN THE LABORATORY'S LIMIT OF DETECTION									

Contaminant (units)	Violation Y / N	Running annual Average (RAA) or Highest Level Detected	Range Detected Absent (A) or Present (P)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
Microbiological							
Total Coliform Bacteria (System takes ≤ 40 monthly samples)	No	0	A	Varies	0	7 per month	Naturally Present in Environment
Fecal coliform and E. Coli	No	0	A	Varies	0		Human and animal fecal waste
Turbidity (NTU), surface water only	No	0.168 (RAA)	Range 0.07 to 0.26	None	n/a	Daily	Soil Runoff
Disinfectants							
Chlorine (ppm)	No	0.84 to 1.19		MRDL = 4	MRDLG = 4	Continuous	Water additive used to control microbes
Disinfection By-Products							
Haloacetic Acids (ppb) (HAA5)	No	18	6.6 to 18	60	n/a	Quarterly	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM)	No	72	40 - 72	80	n/a	Quarterly	Byproduct of drinking water disinfection
Lead & Copper							
Copper (ppm)	No	0.28	.010 - 0.46	1.3	0	08/2018	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	No	4.1	ND - 4.3	15	0	08/2018	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides							
Alpha emitters (pCi/L)	No	7.0	P	15	0	04/2019	Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	No	ND	A	5	0	04/2019	Erosion of natural deposits
Uranium (ug/L)	No	7.1	P	30	0	04/2019	Erosion of natural deposits
Inorganics							
Barium (mg/L)	No	.082	P	2.0	0	2/2019	Erosion of Natural deposits
Arsenic (mg/L)	No	0.001	P	0.010	0	2/2019	Erosion of natural deposits, runoff from orchards, runoff from glass & electronics production wastes
Nitrate (mg/L)	No	1.4	P	5	0	2/2019	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (mg/L)	NO	0.38	P	4.0	0	2/2019	Erosion of Natural deposits
Nickel	No	<.005	A	N/A	0	2/2019	
Special Monitoring Contaminants							
Sodium	No	220	P	N/A	0	2/2019	Erosion of Natural deposits
Monitoring for Other Unregulated Contaminants (PFOS/PFOA)							
Location		PFOS Results	PFOA Results	NL (HA)	PHG	Date	Typical Sources
Main Base – MCAS Yuma	No	ND	4.50ppt	70ppt	None	5/2019	Industrial Use Chemical
Cannon Air Defense Complex	No	12.5ppt	11.6ppt	70ppt	None	5/2019	Industrial Use Chemical
Martinez Lake	No	ND	ND	70ppt	None	5/2019	Industrial Use Chemical

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for PWS ID 14082

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. Inadvertently, some 2019 routine samples were not submitted in a timely manner. At no time was the base drinking water at risk of contamination.

What should I do?

Nothing needs to be done by you at this time.

The table below lists the untimely reports, or samples which were improperly tested during 2019 with explanations for each error, timeframes in which they occurred and the corrective actions taken to remedy the error.

Violation Type	Explanation, Health Effects	Time Period	Corrective Actions
Reporting Failure	Late Crypto samples, No adverse health effects.	04/01/2019 - 08/31/2019	Samples submitted to unapproved lab. Samples taken and retested, corrected communication failures between Lab - MCAS and ADEQ. ¹
Reporting Failure	Late Submittal of Revised Total Coliform Rule (RTCR) report, no health effects.	04-01-2019 – 04-30-2019	Corrected communication failures between Lab - MCAS and ADEQ. ¹
Reporting Failure	Late Submittal of RTCR report, no health effects.	05-01-2019 – 05-31-2019	Corrected communication failures between Lab - MCAS and ADEQ. ¹
Reporting Failure	Late Submittal of RTCR report, no health effects.	06-01-2019 – 06-30-2019	Corrected communication failures between Lab - MCAS and ADEQ. ¹

¹E-mail firewalls prohibited communication between laboratory, MCAS and ADEQ. Information technology improvements by all three parties have corrected issue.

Report generated in accordance with Arizona Administrative Code Title 18 Chapter 4 and Code of Federal Regulations Title 40 Section 141.153.